

Stereo Motion Amplifier



A 300

OWNER'S GUIDE

Important Safety Instructions

The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of “dangerous voltage” inside the product that may constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE A300 COVER. THERE ARE NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

1. **Read Instructions** — Read all the safety and operating instructions before operating this product.
2. **Heed Warnings** — Adhere to all warnings on the product and in the operating instructions.
3. **Cleaning** — Unplug this product from the wall outlet before cleaning. Clean the outside of the product only.
4. **Water and Moisture** — Do not use this product near water.
5. **Ventilation** — Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided.
6. **Heat** — The product should be situated away from heat sources such as radiators, heat registers, stoves, and other products (including amplifiers) that produce heat.
7. **Power Sources** — Operate this product only from the type of power source indicated on the voltage selector switch. If you are not sure of the type of power supply to your home, consult your dealer or local power company. This product is equipped with a three-prong grounding plug. This plug will only fit into a grounding power outlet. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding plug.
8. **Power Cord Protection** — Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them.
9. **Lightning** — Unplug the unit from the wall outlet for added protection during a lightning storm or when it is left unattended and unused for long periods of time. This will prevent damage to the product due to lightning and power line surges.
10. **Overloading** — Do not overload wall outlets or extension cords. This can result in a fire or electric shock.
11. **Inserting Objects into Unit** — Never push objects of any kind into this product through any openings; they may touch dangerous voltage points or short out parts that could result in fire or electric shock.
12. **Servicing** — Do not attempt to repair or service this product yourself. Opening or removing covers may expose you to dangerous voltage and other hazards. Refer all servicing to qualified service personnel.
13. **Damage Requiring Service** — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions: a) If the power-supply cord or plug is damaged b) If liquid has been spilled into the product c) If the product does not operate normally by following the operating instructions e) If the product has been dropped or damaged in any way f) If the product exhibits a distinct change in performance.
14. **Replacement Parts** — When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer. Unauthorized substitutions may result in fire, electric shock, and other hazards.

Introduction and Front Panel Controls

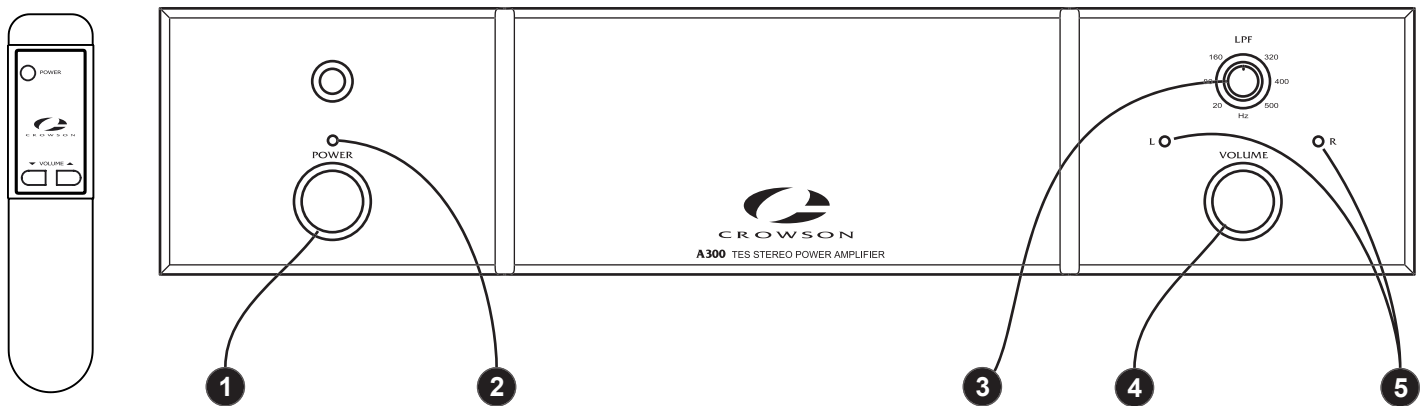
Congratulations on your purchase of the Crowson A300 Integrated Stereo Motion Amplifier. The A300 is designed to perfectly complement Crowson TES 100 Actuators. Seamlessly integrated into your home theater system, the A300 helps deliver the world's most true-to-life motion. Like all Crowson products, the A300 meets meticulous design requirements, achieving both aesthetic and technical excellence.

Unpacking

Carefully unpack and inspect your A300 for shipping damage. If your A300 is damaged please contact your local Crowson dealer or a Crowson technical support representative for guidance.

Check for the following accessories:

1. Remote control (complete with two AAA batteries)
2. Detachable AC power cord



1 Power Button: Press the front panel Power Button to turn the A300 on. The "on" state is indicated by blue illumination around the button. Press the Power Button again to turn the A300 off. The power can also be turned on and off with the remote control. The Power Button controls the standby condition when the rear panel power switch is set to Auto. Note: It is normal for the A300 Power Standby Indicator to flash briefly while the A300 is turned on.

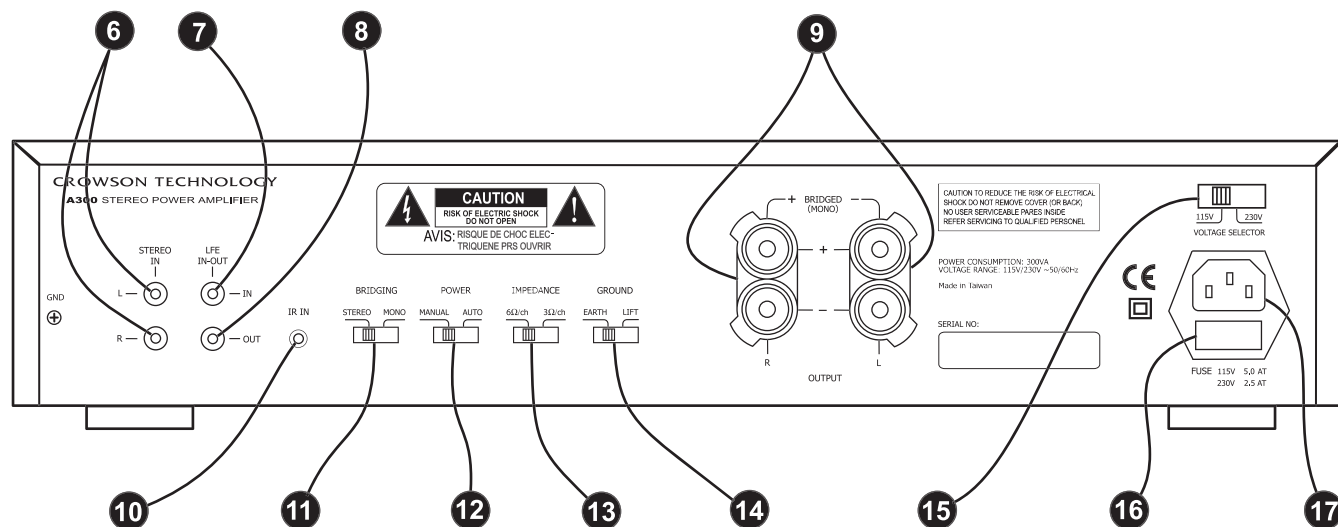
2 Power Standby Indicator: The A300 is in "standby" mode when the Power Standby Indicator is illuminated red.

3 LPF Knob: The LPF, or Low Pass Filter, removes unwanted high frequency content from the output signal. Adjusting the LPF Knob to the preferred setting will ensure that desirable low-frequency motion is present, while undesirable high-frequency content (such as motion from human voices) is not. Proper adjustment of the LPF Knob will allow your motion experience to most closely resemble a real-world sound experience. The LPF Knob allows adjustment of the frequency at which the filtering begins. Start with the knob set to 320Hz. Reduce the frequency setting if unwanted high frequency content such as voices is present during testing. Increase the setting if you feel that desirable content is being unnecessarily removed.

4 Volume Knob: Adjust the intensity of motion by turning the Volume Knob clockwise to increase, or counter-clockwise to decrease. Set the intensity to preferred levels. If the red Peak Indicators above the Volume Knob illuminate during periods of intense motion, reduce the volume until the Peak Indicators are not flashing. The volume can also be adjusted with the remote control.

5 Peak Indicators: The L(left) and R(right) peak indicators will illuminate red when the A300 is achieving it's maximum output. Although the A300 contains a soft clip feature that prevents overload and distortion during maximum output, peak indicator illumination should be avoided.

Rear Panel Connections and Controls



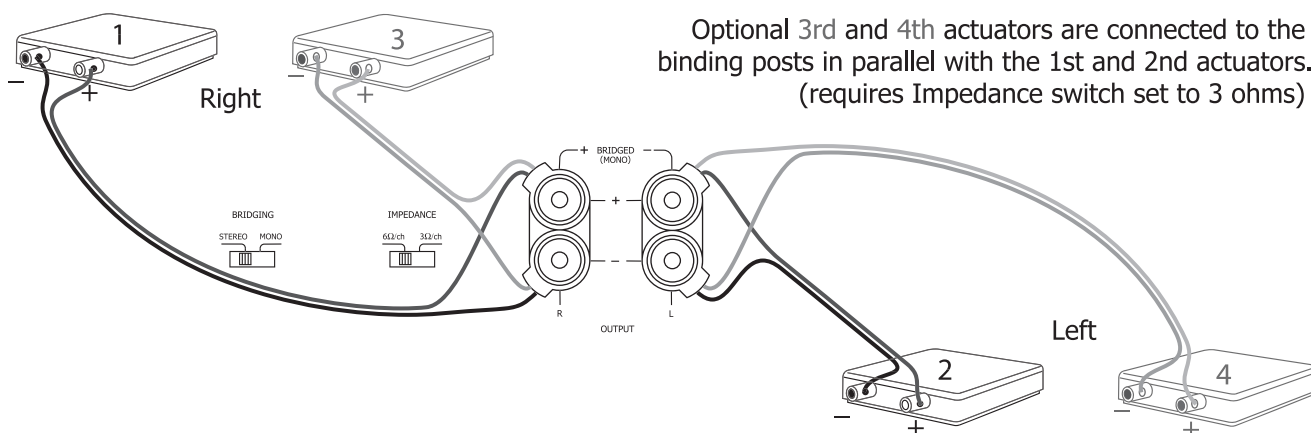
6 Left and Right Input Jacks: Connect shielded audio cables from your receiver, preamplifier or system controller's Left Front and Right Front output jacks to the A300's Left and Right Input Jacks. Use three-way RCA splitters when the Left Front and Right Front audio signal is needed for additional amplifiers. IT IS IMPORTANT TO USE ALL THREE INPUTS; LEFT, RIGHT, AND LFE TO INSURE THAT ALL LOW-FREQUENCY CONTENT IS UTILIZED.

7 LFE Input Jack: Connect a shielded audio cable from your receiver, preamplifier or system controller's LFE/SUB output jack to the A300's LFE Input Jack. IT IS IMPORTANT TO USE ALL THREE INPUTS; LEFT, RIGHT, AND LFE TO INSURE THAT ALL LOW-FREQUENCY CONTENT IS UTILIZED AND THAT STEREO MOTION IS ENABLED.

8 LFE Out Jack: The LFE Out Jack can be used to supply signal to your subwoofer or to the LFE Input Jack of a second A300 Amplifier. The LFE Out Jack is a pass-through for the LFE Input Jack signal.

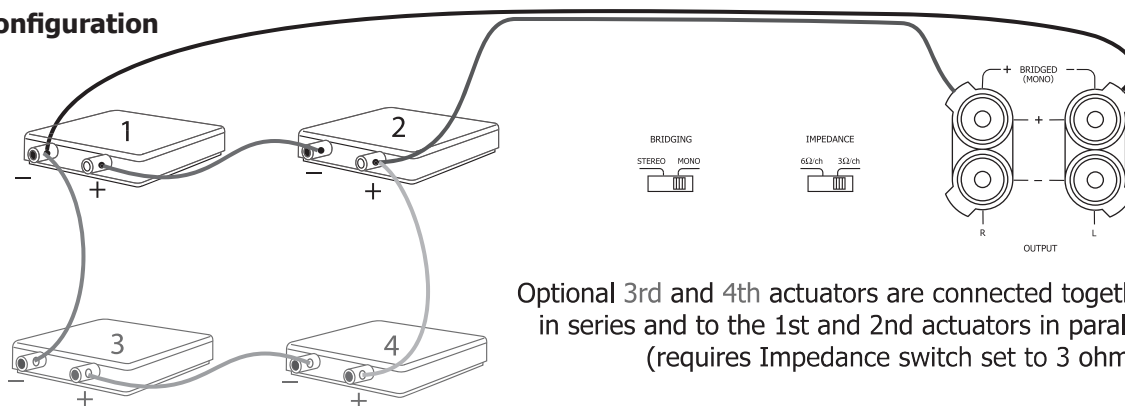
9 Output Binding Posts: There are separate Output Binding Post pairs for connection to left and right TES100 Actuators. Each - and + Binding Post will accept a bare speaker wire up to AWG 10 or two wires up to AWG 14. A single banana plug or dual banana plugs (19mm separation) can alternatively be inserted into the terminal end. When using bare wires, remove only enough insulation (approx ¾") to insert through the hole in the side of each binding post. Before inserting a bare wire, twist the strands tightly between your fingers to prevent strays that might touch the chassis or another terminal and cause a short circuit. If you have soldering experience you may want to "tin" the stripped bare wire with solder for a cleaner termination and to prevent the wire from oxidizing. There are two basic options for connecting actuators to the A300: Stereo Configuration and Mono Configuration. Use the Stereo Configuration wherever possible. When using Actuators in the center of a seating arrangement or when the Stereo Configuration is not possible, use the Mono Configuration.

Stereo Configuration



Rear Panel Connections and Controls

Mono Configuration



- 10 IR Input Jack:** Power on, off and volume can be controlled through the IR Input Jack when the front panel of the A300 is hidden from sight. Connect a stereo 1/8" control cable from your remote control system to the IR Input Jack.
- 11 Bridging Switch:** A single speaker cable can be used to power one to four TES-100 actuators in a Mono Configuration by selecting the "Mono" position of the Bridging Switch. Two or four TES-100 Actuators can be powered in mono by using the two red Output Binding Posts (bridged) and wiring the transducers in a series configuration as shown in the Mono Configuration illustration. One TES-100 Actuator can be powered in mono by connecting the actuator's red and black binding posts directly to the two red Output Binding Posts (bridged). When using the Mono Configuration, L, R and LFE inputs should still be used, the rear Impedance Switch should be set to 3Ω/ch and the minimum impedance load should be 6 ohms.
FOR NORMAL OPERATION WITH STEREO MOTION THE BRIDGING SWITCH SHOULD BE SET TO "STEREO".
THE A300 POWER CORD SHOULD ALWAYS BE REMOVED BEFORE MOVING THE BRIDGING SWITCH.
- 12 Rear Power Switch:** When the Rear Power Switch is set to the "Auto" position, the A300 will be turned on when an audio signal is present at its L, R or LFE Input jacks. After the audio signals cease, the A300 will remain on for approximately five minutes. This prevents unintended turn-off during pauses in your music or movies. The "Auto" position also changes the front panel Power button to a standby on and off selector. The red Power Standby Indicator on the front panel above the Power Button indicates a standby condition. When the Rear Power Switch is in the "Manual" position, the auto turn-on function is disabled and the A300 must be turned on and off manually with the Power Button on its front panel or remote control.
- 13 Impedance Switch:** For a single pair of TES-100 Actuators (6 ohms each) the Impedance Switch should be set to the 6Ω/ch position. The Impedance Switch must be set to the 3Ω/ch position when using more than two TES 100 Actuators. Do not use more than four total TES 100 Actuators.
- 14 Ground Switch:** The Ground Switch disconnects or "lifts" the audio circuit ground from the chassis ground. This often helps to eliminate audible hum that results from ground loops. Begin with the Ground Switch in the "Earth" position. If you feel or hear background hum in the Actuators connected to the A300, try setting the Ground Lift Switch to the "Lift" position.
- 15 Voltage Selector Switch (115v - 230v AC):** The 115V position of this switch is correct for North America; most other regions require setting it to 230V. Make sure the 115/230V switch is set for the correct AC line (mains) voltage before you connect the A300's power cord and TES-100 Actuators. THE A300 MAY BE SERIOUSLY DAMAGED IF THIS SWITCH IS SET INCORRECTLY.
- 16 Fuse:** Check to make sure the proper Fuse is used for your AC line (mains) voltage. Use a small flathead screwdriver to pry open the Fuse holder. For 230V use a T3.15AL250V fuse. For 115V use a T5AL250V Fuse. The Fuse is a "Slo-Blo" type, sized at 5mm diameter x 20mm. The Fuse will not blow unless the unit is overstressed. BEFORE REPLACING THE FUSE, CORRECT THE CONDITION THAT CAUSED IT TO BLOW IN THE FIRST PLACE.
- 17 Power Cord Socket:** Plug the AC Power Cord into the Power Cord Socket.

Troubleshooting and Specifications

Troubleshooting

No Motion

- Check that AC is live.
- Is the unit on? The front panel Power Button should be illuminated in blue. If it is not, check the setting of the rear power switch. If it is set to the "Auto" position and the red Power Standby Indicator light is illuminated, make sure an input signal is present. If the switch is set to "Manual" press the front Power Button.
- Check that input cables and speaker wires are secure at both ends.
- Check the fuse.
- Make sure the control preamp/receiver is on and the system speakers are producing low-frequency sound (bass).
- Check for short-circuited speaker wires.
- Check for excessive temperature and inadequate ventilation conditions.
- Check the LPF Knob. Increasing the setting will increase the quantity of motion.
- Check the Volume Knob. Increasing the setting will increase the quantity of motion.

Background Hum

- Move the Ground switch to "Lift".
- Move audio cables and AC cords away from each other.
- Try different routes for the audio cables and AC cords.
- Make sure insulating shoulder washers are used if unit is rack-mounted.

Overheating

- Remove any external sources of heat.
- Increase ventilation around the A300.
- Change Impedance switch to 3Ω/ch.

Specifications

Continuous RMS Power Output

2 Hz – 600Hz, Both Channels Driven
150 watts x 2, 6 ohm load (two actuators)
160 watts x 2, 3 ohm load (four actuators)

Frequency Response

2 Hz - 600Hz, +0/-3 dB, 1 watt

Input Impedance

33 Kohm

Max Input Sensitivity

100 mV in for 150W/ch out

Auto Turn On

Audio sense 15mV
5 minute turn off delay

AC Power Requirement

110 - 120 V / 220 -240 V, 50 - 60 Hz
500W

Low pass filter (LPF)

variable from 20Hz to 600Hz
12db/octave

Dimensions

16.5" Wide
15.5" Deep with connectors
3.75" High with feet, 3.5" panel only
2U rack-mountable (RMA300 rack ears required)

Net Weight

24 lbs

Low pass filter (LPF)

variable from 20Hz to 600Hz
12db/octave

Warranty

Crowson Technology, LLC warrants that each A300 purchased from Crowson Technology, LLC is free from defects in materials and workmanship under normal usage during the warranty period. Said warranty shall commence on the day of purchase by the End-User and continue for a period of (2) years.

To exercise the End-User's rights under this warranty, the Product must be returned at the End-User's expense, to Crowson Technology, LLC. The returned product must be accompanied by (i) the End-User's sales receipt or invoice that shows the date of sale and product type (ii) a return authorization number, issued by Crowson Technology, LLC that is clearly displayed on the outside of the shipping carton. The Warranty extends only to the original End-User purchase and is not transferable.

During the Warranty Period, Crowson Technology, LLC will, at no additional charge, repair or replace defective parts or, at the discretion of Crowson Technology, LLC, replace the entire unit. Crowson Technology, LLC shall have no other obligation, and repair or replacement shall be the End-User's exclusive remedy for any defect in the Product.

Crowson Technology, LLC is confident in the quality of our products. If your product fails, please contact our technical support by email at support@crowsontech.com or by telephone at (888) 427-6976 to request repair or replacement. Please have the following information at hand when requesting a return authorization number for replacement/repair of your A300: (i) Product Name (ii) Product Serial Number (iii) invoice number (from invoice/receipt).

Warranty Limitations

This Limited Warranty does not extend to any Product that has been damaged due to accident, unauthorized modifications, tampering, abuse, misuse, alterations, unusual physical or electrical stress, or to any Product that has been serviced by other than Crowson Technology, LLC or its authorized agents or which has been used in any manner other than from ordinary use in the application for which it was intended.

Other than those warranties contained in these terms and conditions, manufacturer makes no representations or warranties with regard to products sold under this purchase order, all of which warranties are expressly disclaimed hereby. Without limiting the foregoing, to the fullest extent permitted by applicable law, manufacturer disclaims all other express or implied warranties of manufacture, design, and/or suitability for a particular purpose.

Warranty Disclaimer

Crowson Technology, LLC shall have no liability to anyone for incidental or consequential damages or any other liability, loss or damage arising out of or related to the merchandise sold. Crowson Technology, LLC makes no warranty as to the performance of third-party-manufactured merchandise and which does not bear the Crowson emblem. This disclaimer by Crowson Technology, LLC in no way effects the terms of the manufacturer's warranty if any.



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